

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

RECEIVED
SEP 25 1996
FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

In the Matter of)
)
Revision of the Commission's Rules To) CC Docket No. 94-102
Ensure compatibility with Enhanced) RM-8143
911 Emergency Calling Systems)

DOCKET FILE COPY ORIGINAL

COMMENTS OF GTE SERVICE CORPORATON

GTE Service Corporation on behalf of its telephone and wireless companies ("GTE") hereby submits its comments in response to the Federal Communications Commission's ("FCC" or "Commission") *Further Notice of Proposed Rulemaking* ("FNPRM") in the above-captioned proceeding.¹ In the FNPRM, the Commission proposes to adopt additional means of ensuring that improvements made possible by technological advances are incorporated into enhanced 911("E911") systems. In particular, the Commission seeks comment on a number of issues, including: (1) whether more accurate and specific location information should be required; (2) whether location information should be required to be supplied within a certain number seconds after the call is placed and updated throughout the call; (3) and what steps can be taken to improve 911 availability.

GTE generally supports the Commission's efforts to improve wireless 911 calling capabilities. GTE notes, however, that the technology on which the Commission's

¹ Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, *Further Notice of Proposed Rulemaking*, CC Docket No. 94-102, RM-8143 (released July 26, 1996).

No. of Copies rec'd
1st ABCDE

24

E911 location information requirements and proposals are based is still developing.

Accordingly, as discussed below, GTE believes that the Commission's efforts to adopt even more advanced E911 requirements is premature and should be postponed three years to allow these capabilities to mature.

I. DISCUSSION

A. More Advanced Location Information

The *FNPRM* proposes to require that covered carriers (including cellular and personal communications services -- "PCS"), after the initial five year period, provide public safety answering points ("PSAPs") information that locates a wireless 911 caller within a radius of 40 feet using latitude, longitude and vertical location data with a degree of accuracy of 90 percent.² The Commission seeks comment on a number of aspects regarding this proposal.

As noted recently by the Telecommunications Industry Association ("TIA"), the technology on which the delivery of more advanced location information will be based is still in the development stage.³ TIA states that while it is hopeful that manufacturers will develop the technology necessary to meet the Phase II location information (location of the caller within a 125 meter radius 67 percent of the time) deadline, TIA believes it is

² *Id.* at 10, 69.

³ Petition for Reconsideration and Clarification of the Mobile and Personal Communications Division of the Telecommunications Industry Association, CC Docket No 94-102, RM-8143, filed September 3, 1996 (hereinafter "TIA Petition") at 16-20.

premature to specify either an accuracy requirement or a compliance scheme for automatic location identification ("ALI") at this time.⁴

TIA notes that the five year implementation deadline for Phase II ALI was based on statements made by equipment manufacturers. TIA argues, however, that even equipment manufacturers have reservations about a five year implementation schedule. TIA cites a host of technological pitfalls and environmental factors that must be overcome in order to meet the Phase II deadline.⁵ As a result of these and other obstacles, TIA recommends that the Commission reconsider its Phase II ALI requirements until industry committees have assessed the implementation of 125 meter radius ALI in a variety of environments under different conditions.

GTE agrees with TIA's assessment of the state of ALI technology. GTE also notes that because of differences in population and geography in different areas (urban versus rural versus high terrain), no single location technology will be able to be universally deployed. Therefore, GTE will be evaluating various location technologies depending on the characteristics of different locations. Because GTE provides service in a number of diverse geographic areas throughout the nation, it anticipates that the testing process will be difficult and time consuming.

⁴ *Id.* at 16.

⁵ For example, TIA states that signal triangulation -- the most likely method of delivering Phase II ALI -- may be affected by co-channel interference, multipath effects, and geographic obstacles. In addition, triangulation requires that at least two and possibly three -- depending on the methodology used -- receivers must be able to measure the signal from the mobile station. TIA argues that a mobile station may not be able to establish a clear link to the requisite number of base stations in 67 percent of all cases. *Id.* at 17-18.

Given that the technology on which Phase II depends is not developed enough to be certain that Phase II will be possible in the required time frame, adopting more advanced requirements at this time is inadvisable. Moreover, even assuming that all technological problems can be resolved, implementation of more advanced capabilities, including vertical information, is likely to require, at minimum, the installation of many additional antennas in each service area. Prior to adopting any such requirement, the Commission must evaluate whether the cost of installing such equipment is warranted by the additional benefit received. This determination cannot be made until the technology develops to the point where accurate cost estimates are possible.

For these reasons, GTE recommends that the Commission postpone adopting more advanced 911 requirements for three years (measured from the effective date of the *Report and Order*).⁶ At that time, the Commission and the industry will have much better information regarding what capabilities are technically feasible and economically reasonable to implement.

B. Minimum Latency Period

The Commission seeks comment on whether a minimum latency period -- the amount of time after the call is placed that the carrier must provide location information to the PSAP -- should be adopted. The Commission suggests that a latency period of 5 seconds might be reasonable. The Commission also seeks comment on whether

⁶ Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, *Report and Order*, CC Docket No. 94-102, RM-8143 (released July 26, 1996).

covered carriers should be required to update location information every 10 seconds for the duration of the call.⁷

GTE believes that requiring a minimum latency period and periodic updates of location information are important features for E911 service. However, prior to implementing and testing a specific ALI technology, the industry cannot state what type of latency period or update requirement would be reasonable. Accordingly, GTE strongly believes that no latency period or location information update requirements should be adopted until location technology is thoroughly tested and validated under live testing simulations. In addition, when enough information is known to adopt a standard, GTE urges the Commission to consider the different technological approaches to providing ALI. The Commission should avoid adopting a requirement that favors some technologies over others. The Commission should also adopt latency period and update requirements that primarily respond to the needs of emergency services providers, rather than basing the requirement solely on manufacturer's statements and claims.

C. Monitoring and Reporting Requirements

The Commission requests comment regarding what type of monitoring mechanism it should adopt to ensure that carriers are developing and deploying state-of-the-art technology. The Commission suggests that one possible mechanism would be to establish reporting requirements under which covered carriers would periodically inform the Commission of developments relevant to the provision of E911 service. The

⁷ FNPRM at 70.

Commission states that once new technology is reported to be available, it could require deployment if the benefit were found to exceed the cost of implementation.⁸

Given that the Commission currently has a very active open docket considering E911 capabilities and requirements, and assuming the Commission adopts GTE's suggestion to postpone consideration of more advanced capabilities for three years, GTE does not believe any regular reporting requirements are necessary at this time. GTE suggests that when and if reporting requirements become necessary -- most likely after adoption of the next phase of requirements -- the Commission could gather the requisite information through periodic open *ex parte* presentations. The Commission could hold *ex parte* meetings annually, inviting industry, manufacturing and emergency service provider representatives, to elicit information concerning the state of technology and the cost of implementation. Any requirements the Commission deems advisable based on information gathered in this process could then be placed on Public Notice for interested parties to comment.

In addition, GTE urges the Commission to adopt a requirement that developers of advanced location technology have their equipment tested and certified by a neutral, FCC-approved, testing laboratory to ensure that the products will be able to meet FCC location requirements in a variety of environments prior to implementation.

D. Access to 911 Service Via Multiple Mobile Systems

The Commission seeks comment on how to ensure the broad availability of basic 911 service for wireless customers by enabling mobile users to complete a 911 call

⁸ *Id.*

without regard to the availability of the system or technology utilized in the wireless network. Specifically, the Commission seeks comment on whether, to the extent any mobile service is available in the geographic area from which a 911 call originates, the Commission should establish arrangements and procedures under which all wireless 911 calls could be handled by the available service.⁹

As the Commission recognizes in the *FNPRM*, its desire to enable a 911 caller to access any available network directly conflicts with its decision not to establish a common technical air interface for broadband PCS or digital cellular.¹⁰ As many as eight or nine different CMRS providers may be operating in a particular market, each using a distinct air interface technology. Because these systems will not necessarily be compatible with one another, the Commission's goal of enabling users of any system to access all systems in a particular area is not obtainable at this time.

GTE supports the Commission's decision not to dictate wireless technology choices to licensees and its statement in the *FNPRM* that it does not plan to revisit that decision in the context of seeking to improve 911 availability. GTE also notes that even if a technical solution to 911 availability was feasible, the Commission's proposal may produce results that actually harm the ability of PSAPs to monitor and respond to a 911 call. Notably, the Commission should be aware that connecting the caller to the carrier with the strongest signal will not necessarily result in the 911 caller being connected to

⁹ *Id.* at 71-73.

¹⁰ *Id.* at 72.

the carrier that can best determine the caller's location in accordance with FCC standards.¹¹

E. Consumer Education

Notwithstanding the Commission's efforts to improve 911 access from wireless phones, such access will remain limited to some extent. The Commission therefore seeks comment regarding how users can be informed that not every wireless 911 call will be processed by carriers and delivered to PSAPs for monitoring and response.¹²

GTE believes there are a variety of means of educating customers and the public of the capabilities and limitations of placing wireless 911 calls in each market. GTE agrees with the Commission that customer education will likely have to be accomplished through information provided by all relevant players in the process – manufacturers, emergency services providers, and carriers. From the carrier's perspective, there are a number of ways to convey information to the public. These alternatives range from relatively low cost alternatives, such as billing inserts, to higher cost methods, like mass media advertisements. Given that customers may become confused if inundated with different 911 information from a number of different sources, the Commission should carefully consider the various alternatives and their relative cost and effectiveness before adopting specific information dissemination requirements.

¹¹ For example, assuming that some form of triangulation is necessary to locate the caller within the Commission's parameters, the network picking up the signal may not be able to read the signal at enough base stations to locate the caller. Conversely, a network receiving a somewhat weaker signal from the mobile station may be able to receive the signal at enough base stations to locate the caller.

¹² *FNPRM* at 73-74.

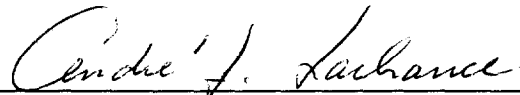
The Commission should also allow cost recovery, in particular if it mandates a higher cost alternative.

II. CONCLUSION

GTE supports the Commission's efforts to improve wireless 911 calling capabilities. GTE notes, however, that the technology on which the Commission's E911 location information requirements and proposals are based is still developing. Accordingly, GTE believes that the Commission's efforts to adopt even more advanced E911 capabilities is premature and should be postponed three years to allow information about these capabilities to develop.

Respectfully submitted,

GTE Service Corporation and its telephone
and wireless companies

By 


Andre J. Lachance
1850 M Street, N.W.
Suite 1200
Washington, DC 20036
(202) 463-5276

September 25, 1996

Their Attorney

Certificate of Service

I, Judy R. Quinlan, hereby certify that copies of the foregoing "Comments of GTE Service Corporation" have been mailed by first class United States mail, postage prepaid, on the 25th day of September, 1996 to all parties of record.



Judy R. Quinlan